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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
NGUYEN, STEVEN H D

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 12/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/203,086	PHILLIPS ET AL.	
	Examiner	Art Unit	
	Steven HD Nguyen	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 October 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. The application states that a terminal disclaimer submitted in the last response. However, the office does not receive it. Please resubmit the terminal disclaimer.

Claim Objections

2. Claim 8 is objected to because of the following informalities: the recitation "the destination terminal" should be changed to – the end user terminal --. Appropriate correction is required.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1, 3-7 and 9-13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6178179. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims 1, 3-7, 9-13 are encompassed claims 1-9 of the US patent 6178179 such as a

central office for transmitting a signal via XDSL transceiver and a translator "regenerator" including a encoder "line code translator", decoder and line driver for transmitting a variable or fixed rate to the end user. However, Phillips does not disclose a translator is disposed at a predetermined distance from the central office wherein the SNR is reach a minimum threshold of quality signal (it is implicitly).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 3-4, 7, 9-10 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mchale (USP 5905781) in view of Bardutz (USP 4766606) and Wu (USP 6219378).

Regarding claims 1, 3-4, 7, 9-10 and 13-14, McHale discloses a central office including a XDSL transceiver for transmitting a video, digital and telephone signals to the end users and receiving the data signals (Fig 4, Ref 160 is an XDSL modem at the central office of Fig 1, Ref 14)and a user has a XDSL transceiver (Fig 1, Ref 30 which includes ADSL and VDSL) for receiving a video signal (Video on demand) via twisted pair copper cable and transmitting data signals to the central office (See col. 6, lines 55-67) and an addition communication technology that extend the maximum length and quality of communication signal (Col. 7, lines 5-15). However, McHale does not discloses a regenerator which disposes between the central office and

the end user, having a transceiver, a decoder and encoder. In the same field of endeavor, Wu discloses a repeater which disposes between the central office and the end user for boosting the signal if the distance between the central office and end user is greater than a predetermined distance (See Fig 1 and col. 4, lines 25-60) and Bardutz discloses (Col 2, lines 45 to col. 4, lines 14) a repeater "regenerator" (Fig 1, Ref Rep 1) which disposes between the central office (Fig 1, Ref office terminal), includes a receiver for receiving a signal (col. 2, lines 51, coupling means), a decoder (col. 2, lines 55-60, data recovery means) for decoding the payload of a received signal into a base data, a encoder (Col. 2, lines 60-65) for encoding and repacking the base data into a desired protocol format and a line driver (Col. 2, lines 52-53, the regenerated signals is recoupled to the line) for retransmitting the encoded signals to the end user wherein the repeater is disposed at a predetermined distance where the SNR of the signal is reached to a threshold of minimum acceptable signal quality (it is implicitly).

Since, McHale suggests an addition communication technology that extend the maximum length and quality of communication signal (Col. 7, lines 5-15) and Wu suggests a repeater must be placed between the central office and the user if a distance between the central office and user is over a predetermined distance to boost the quality of signal. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a repeater between the central office and the end user as disclosed by Bardutz into Wu and McHale's telecommunication system. The motivation would have been to prevent a signal to be degraded and reduce cost.

7. Claims 2, 5-6, 8 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over McHale, Vu and Bardutz as applied to claims 1 and 7 above, and further in view of Fosmark (USP 6084881).

Regarding claims 2 and 8, McHale, Vu and Bardutz do not disclose a repeater for repackaging the base data into ATM protocol or a direct transmission protocol format depending on the protocol requirements of the destination terminal. However, Fosmark discloses a XDSL transceiver for selecting between a direct transmission protocol "Ref 72 and 66" and ATM protocol "Ref 66 and 70" to repackaging the base data for transmitting to the destination terminal.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method of selecting between a direct transmission protocol "Ref 72 and 66" and ATM protocol "Ref 66 and 70" to repackaging the base data as disclosed by Fosmark into McHale's telecommunication system. The motivation would have been to prevent a signal to be degraded and reduce cost.

Regarding claims 5-6 and 11-12, McHale, Vu and Bardutz do not disclose the claimed invention. However, a transceiver for generating a fixed rate and variable rate is well-known and expected in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a transceiver for generating a fixed rate and variable rate into a McHale, Vu and Bardutz's telecommunication system. The motivation would have been to prevent a signal to be degraded and reduce cost.

Response to Arguments

8. Applicant's arguments filed 8/6/2002 have been fully considered but they are not persuasive.

In response to page 5, the applicant states that Wu does not disclose a repeater being located at a point on the twisted pair cable where the signal to noise ratio of transmitted XDSL signal reaches a threshold of minimum acceptable signal quality. In reply, it is implicitly disclosed in Wu's reference because the distance between the central office and end user site has a limit such 18000 feet wherein the signal will be degraded, such as Signal to Noise ratio reaches a threshold of minimum acceptable signal quality, if the transmitted signal pass the limitation. Therefore, if a service provider would like to transmit a XDSL signal to a subscriber having a distance above 18000 feet, the service provider must place a repeater between the central office and the end user site.

In response to page 6 the applicant states that Bardutz does not disclose a repeater having a decoder (col. 2, lines 55-60, data recovery means for decoding the telephone protocol into base data) for decoding the payload of a received signal into a base data and a encoder (Col. 2, lines 60-65, the regenerating the base data into a protocol of telephone system for transmitting to user) for encoding and repacking the base data into a desired protocol format to the end user and including a transformer which will not work with a XDSL receiver. In reply, Bardutz discloses a repeater for receiving a transmitted signal and decoding the received signal into a base signal and encoding the base data into a desired protocol format for transmitting to the end user and including a transformer works with a XDSL receiver because McHale discloses in Figure 10

which includes a transformer for coupling to a XDSL receiver. Therefore, transformer can be interfaced with an XDSL receiver.

9. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

10. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Mchale discloses a method and apparatus for transmitting XDSL signal between provider and end user and suggests that an addition communication technology that extend the maximum length and quality of communication signal (Col. 7, lines 5-15) may be placed between provider and end user. Wu suggests that a repeater may be placed between the provider and end user in order to boot the signal in order to overcome the distance limitation (See col. 2, lines 32-51 and col. 4, lines 41-60). Bardutz discloses a repeater for receiving a transmitted signal such and decoding the received signal into a base signal and encoding the base data into a desired protocol format for transmitting to the end user (Fig 1, Office terminal receives four full duplex voice channel and multiplexing them into a single pair telephone line for transmitting to a repeater which decoding the received signal into a base signal and encoding the base data into a

desired protocol format for transmitting to the end user). Furthermore, Bardutz suggests that a repeater must be placed between the office terminal and end user if the distance between them is over maximum limit (See col. 7, lines 49 to col. 12). Therefore, it would have been one of ordinary skill in the art would have been apply a teaching of Bardutz such as decoding a received signal "telephone protocol" into base data and encoding the base data to the desired protocol "telephone protocol" to transmit to the user.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (703) 308-8848. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on (703) 308-6602. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Steven HD Nguyen
Primary Examiner
Art Unit 2665
December 26, 2002